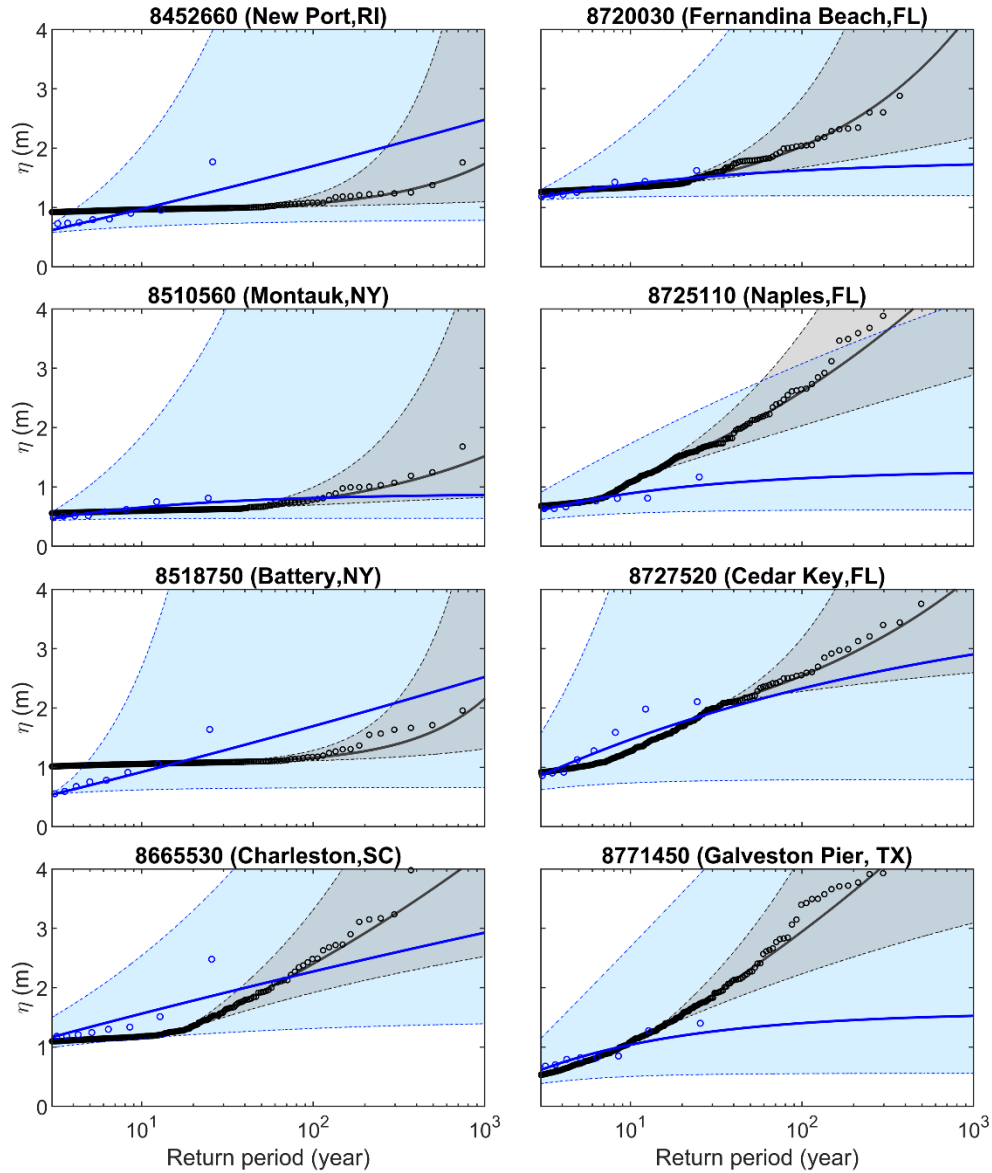


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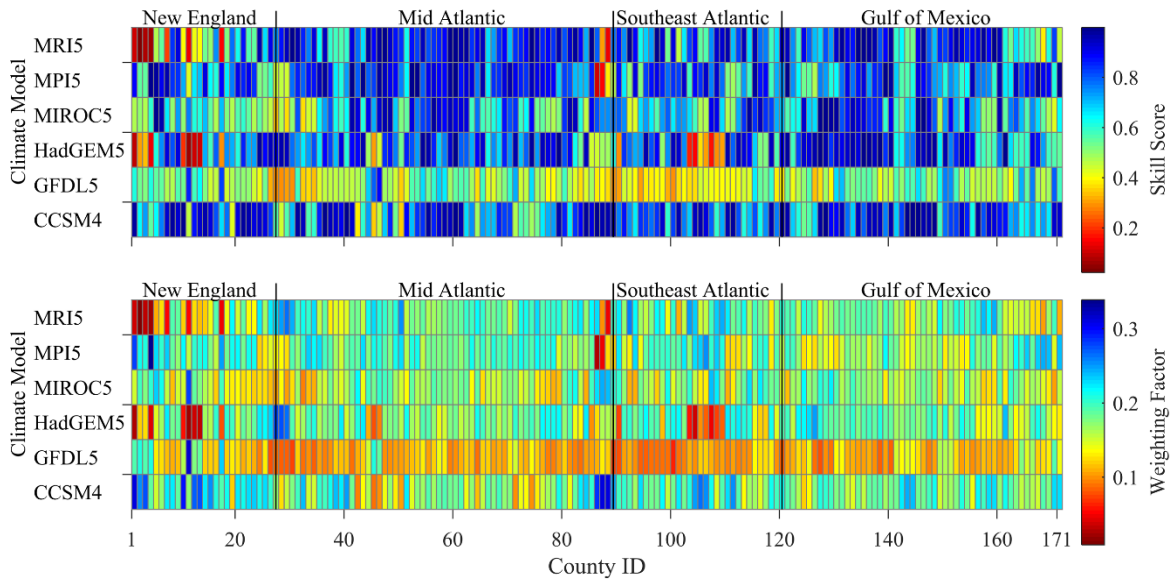
Climate Change Exacerbates Hurricane Flood Hazards Along U.S. Atlantic and Gulf Coasts in
Spatially-varying Patterns

Marsooli et al.

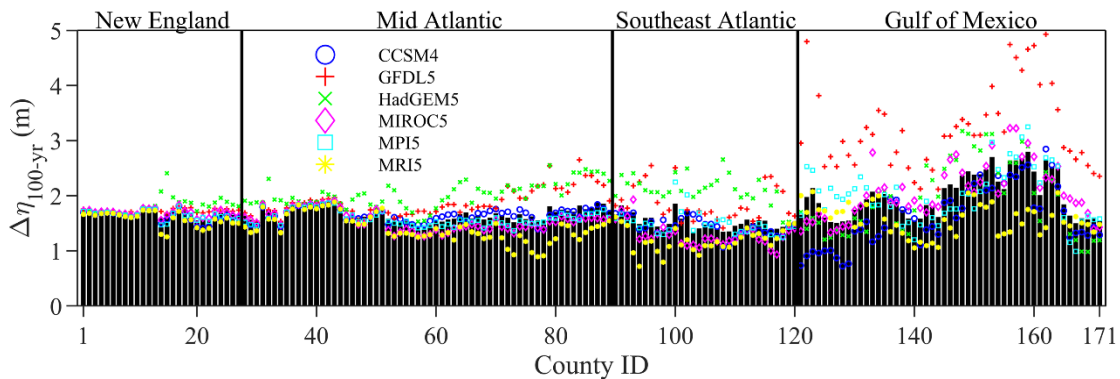
Supplementary



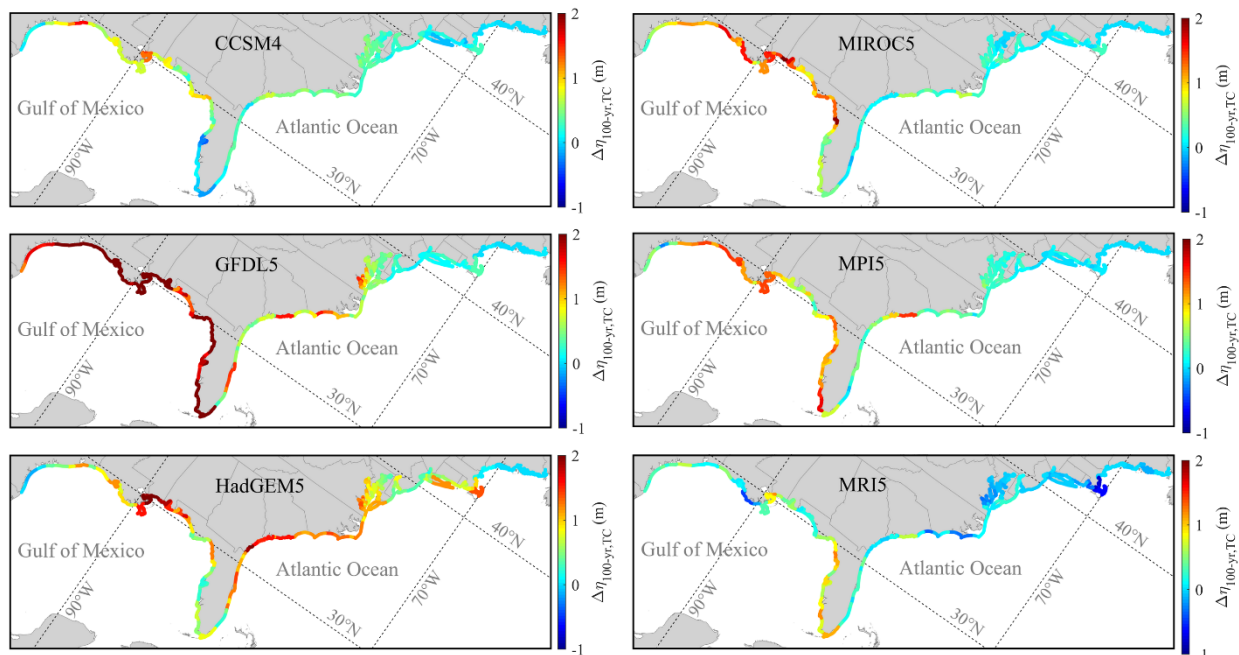
Supplementary Figure 1. Flood return period curves estimated based on the observed (blue) and modeled NCEP-based (black) storm tides for the historical period of 1980–2005. Each circle represents the peak storm tide associated with a TC event. The shading shows the 90% confidence interval. Source data are provided as a Source Data file.



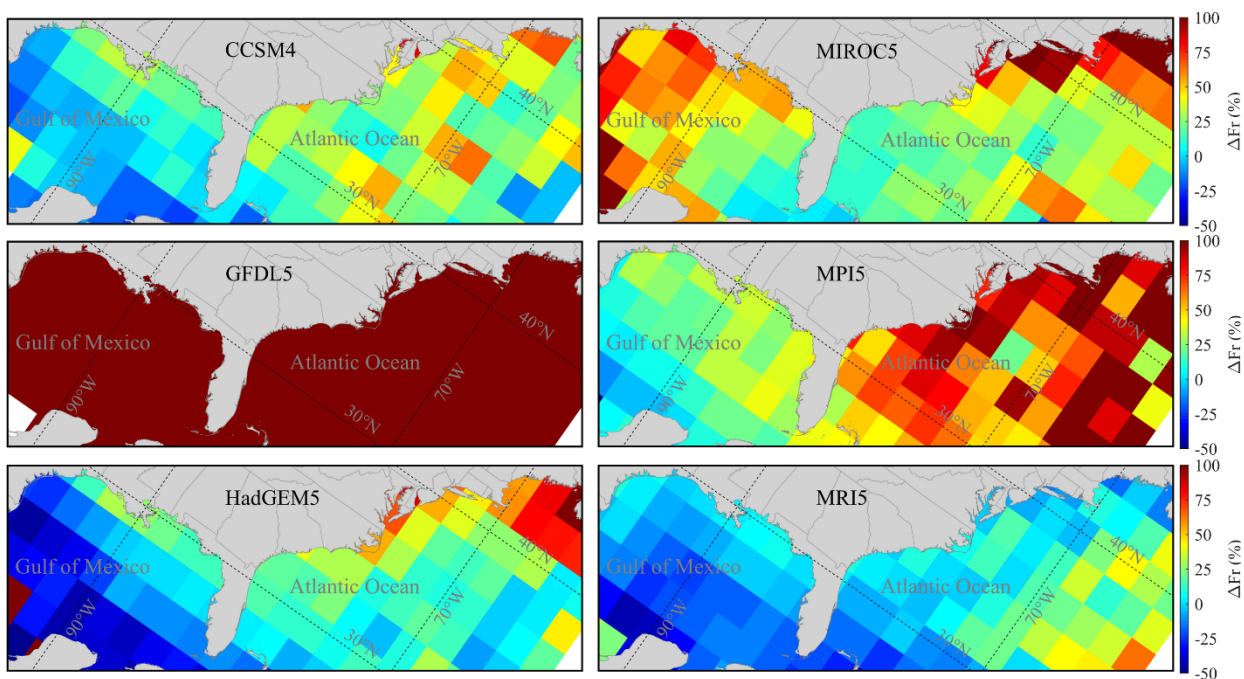
Supplementary Figure 2. Skill score (top) and weighting factor (bottom) of each climate model calculated by comparing the NCEP-based and climate-model-based storm tide return levels for the historical period of 1980–2005. Weighting factors are separately calculated for each coastal county. Source data are provided as a Source Data file.



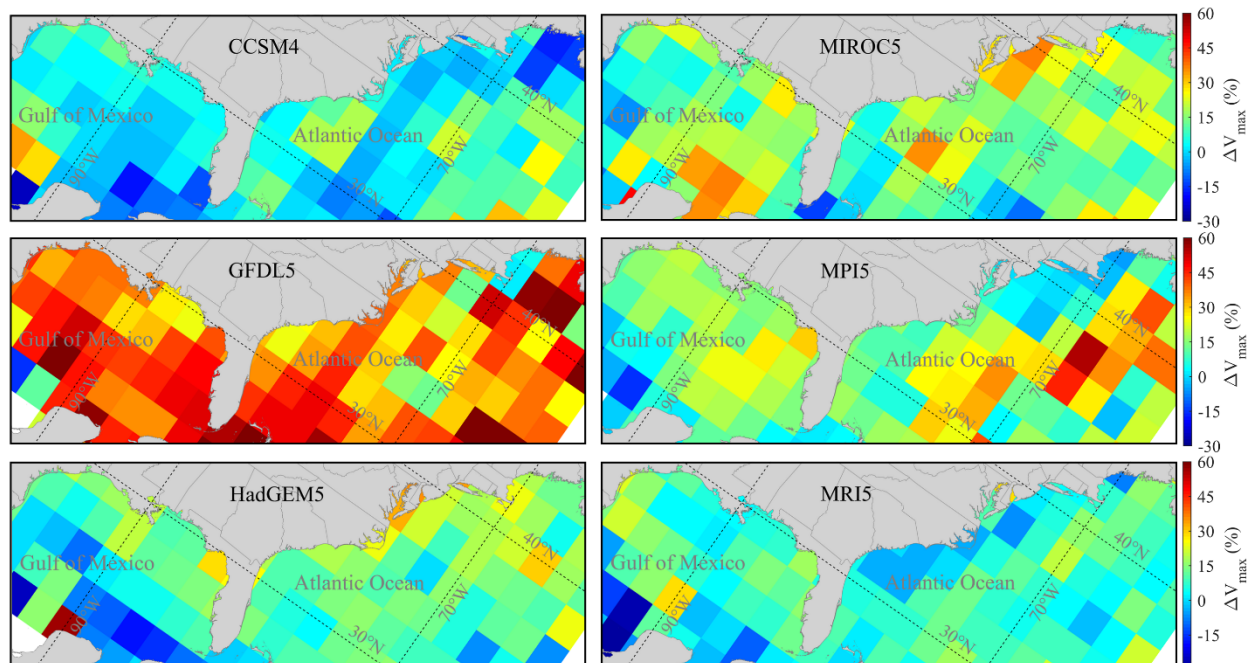
Supplementary Figure 3. Projected weighted-average (black bars) changes in the best estimate of η_{100-yr} from the historical period to the future period. Projections from individual models are also shown. Source data are provided as a Source Data file.



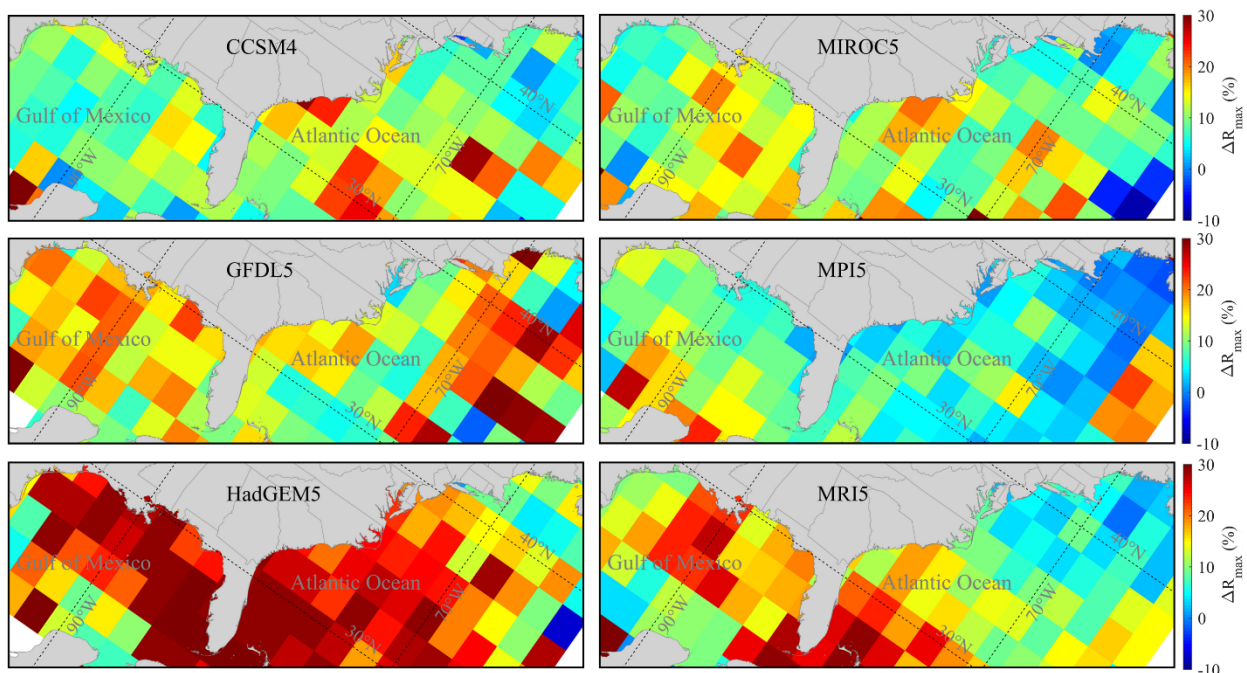
Supplementary Figure 4. Changes in the best estimate of $\eta_{100\text{-yr}}$ induced by only TC climatology change (i.e. in the absence of SLR) for the future period of 2070–2095. Source data are provided as a Source Data file.



Supplementary Figure 5. Changes in TC annual frequency Fr projected by six climate models for the future period. Results in each box (2° by 2° resolution) represent 90^{th} percentile of storms that pass through the box. Source data are provided as a Source Data file.

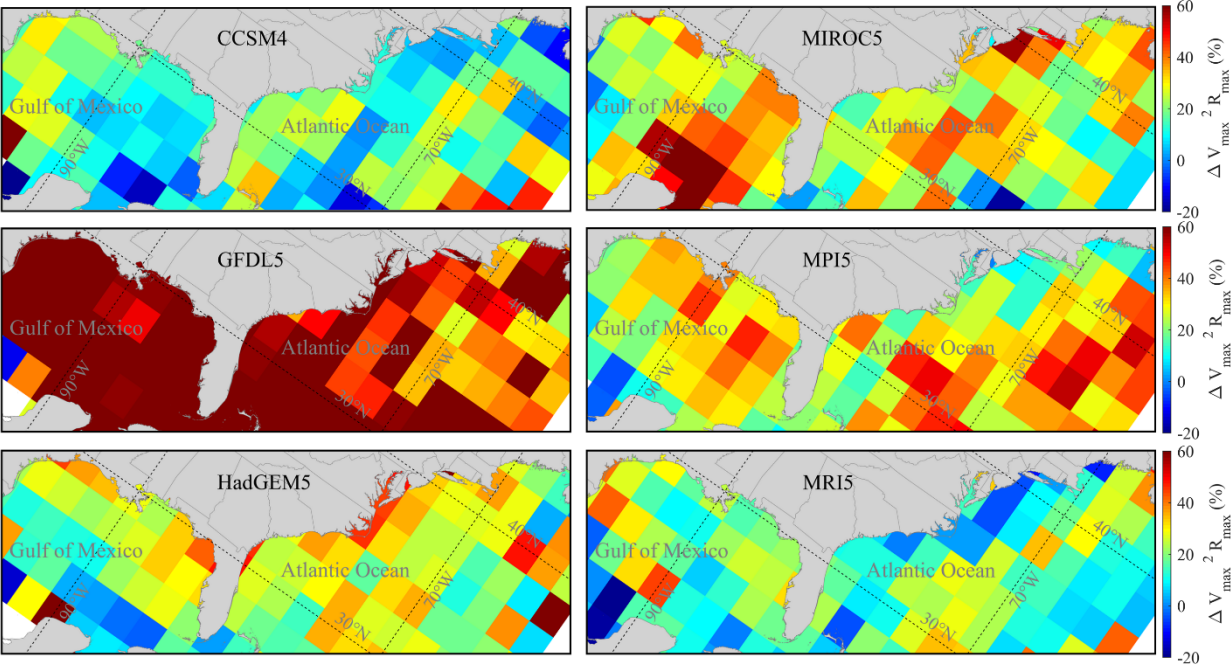


Supplementary Figure 6. Changes in maximum wind speed V_{\max} projected by six climate models for the future period. Results in each box (2° by 2° resolution) represent 90th percentile of storms that pass through the box. Source data are provided as a Source Data file.



Supplementary Figure 7. Changes in radius of maximum wind speed R_{\max} projected by six climate models for the future period. Results in each box (2° by 2° resolution) represent 90th percentile of storms that pass through the box. Source data are provided as a Source Data file.

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Supplementary Figure 8. Changes in the index $V_{\max}^2 R_{\max}$ projected by six climate models for the future period. Results in each box (2° by 2° resolution) represent 90th percentile of storms that pass through the box. Source data are provided as a Source Data file.